cylinder materials comprise tungsten or titanium carbide which are placed under precompression by being oversized with respect to the sleeve. To maintain the proper compressive forces on insert **12**, sleeve **14** may be formed of a hardened tool or tempered alloy steel.

In order to form the assembly, insert **12** and sleeve **14** are formed respectively with exterior and internal tapered surfaces **18** and **20**, with a taper decreasing from the top **22** of the assembly to its bottom **24**. An exemplary taper angle may be 1.2°.

Assembly is effected by positioning insert **12** at top surface **22** and axially forcing the insert along internal surface **20** with a hydraulic press until the tops of the insert and the sleeve are nearly flush with each other. To insure that the two components remain interlocked, grooves **26** and **28** are formed respectively externally on the cylinder insert and internally in the sleeve are positioned to face one another when the insert and the sleeve are completely assembled together. A split ring **30** effects the interlock. The ring is originally compressed so that it will reside within groove **26** in its compressed state without projecting beyond the external surface of the tapered insert. The only condition of compression is that the ring's outer surface **32** slide within internal surface **20** of the sleeve.

For assembly, the ring is either compressed into external groove **26** on carbide insert **12** or expanded into internal groove **28** in the sleeve and a lubricant placed on surfaces **18** and **20**. The tapered insert is axially introduced into the sleeve and, after it has reached the desired penetration within sleeve **14**, ring **30** expands or contracts into its juxtaposed groove to firmly and permanently interlock the assembly.

Metallurgical locking is illustrated with respect to FIG. 3 in which assembly **40** includes an insert **42** and sleeve **44**, which are similarly configured as the sleeve and insert of FIGS. **1** and **2**. In a like manner, insert **42** is provided with an external tapered surface **48** and sleeve **44** is provided with an internal tapered surface **50**. The interlocking medium here, however, comprises a metal **60** which is placed on one or both of surfaces **48** and **50**. The metal must also be capable of acting as a lubricant. Examples include gold, copper, silver, nickel and aluminum. In one experiment, a layer of gold 5 micrometers thick was placed on an insert of titanium carbide. Insert **42** was placed in position to be axially driven within sleeve **44**. Metal **60** of gold provided the necessary lubrication and, after completion of the two component assembly, the gold diffused into the insert and the sleeve to form a metallurgical diffusion bond therebetween at their surfaces **48** and **50**.

Although the invention has been described with reference to particular embodiments thereof, it should be realized that various changes and modifications may be made therein without departing from the spirit and scope of the invention.

What is claimed is:

1. A method for assembling a prestressed hollow extrusion die of a brittle insert housed within a sleeve without harm to the insert, comprising the steps of:

providing mateable tapered outer and inner surfaces, respectively on the insert and the sleeve, with the outer surface being of a size with respect to the inner surface which will enable the brittle insert to be placed under compression by the sleeve;

lubricating at least one of the tapered surfaces;

press-fitting the tapered outer surface of the insert within the tapered inner surface of the sleeve to place the insert under compression and with the lubricant between said surfaces; and

locking the insert and the sleeve together for preventing slippage between the surfaces by utilizing facing grooves in the tapered surfaces, installing a spring ring under biased potential energy in one of the grooves of the insert and the sleeve, and releasing the energy upon completion of said press-fitting step for permitting the ring to reside partially in both of the grooves.

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